media5 corporation

Enabling Live Communications at the Edge of IP Networks

Technical Bulletin 666

Upgrading from SIP 5.0 to DGW 2.0

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Proprietary

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Introduction

Media5 is pleased to introduce the latest version of its Dgw software. This new software version, labelled Dgw v2.0, can be integrated on the **Mediatrix 3xxx Series, Mediatrix 44xx Series**, and **Mediatrix 41xx Series**.

This document explains how to upgrade from the SIP 5.0 firmware to the latest Dgw v2.0 GA (v2.0r9.150). This upgrade can only be performed on the Mediatrix 41XX series analog gateways.

The Dgw v2.0 software is backward compatible with previous SIP v5.0 for all basic call scenarios.

Disclaimer

The Dgw v2.0 platform contains major differences compared to the SIP v5.0 platform. You may thus encounter some behavioral differences after upgrading to Dgw v2.0. Media5 very strongly recommends to fully test your scenarios in a controlled environment before deploying a live unit running Dgw v2.0.

Affected platforms

The following platforms are targeted by this Technical Bulletin:

- Mediatrix 4102**S** / 4104 / 4104+ / 4108 / 4116 / 4124

Please note that regarding the Mediatrix 4102 platforms, only the Mediatrix 4102S supports Dgw v2.0. Dgw v2.0 is not supported by the 4102.

Required Software and Tools

Before you begin, make sure you have the following third-party softwares and Media5 firmwares:

1. A TFTP server. Media5 suggests the Pumpkin TFTP server (http://kin.klever.net/pumpkin/binaries).
2. Unit Manager Network, available from the Mediatrix Support Portal (MSP) or the Download Portal.

   (http://www.media5corp.com/downloads)
3. Fimware SIP v5.0.28.229 for your platform.
4. Firmware Dgw v2.0r9.150 for your platform.
5. Transition load SIP v5.0 to Dgw v2.0. The current load is Mediatrix41xx_Dgw_2.0.109.179.
6. Transition load Dgw v2.0 to Sip v5.0 in case a rollback to SIP v5.0 is necessary. The current load is Dgw_Mediatrix41xx_SIP_5.0.28.229.

The firmware versions are subject to changes

Useful Technical Bulletins

- Technical Bulletin 0658 - Configuration_Scripts_3000-4000-Series.pdf
- Technical Bulletin 0665- SIP v5.0 to Dgw v2.0 Variables Mapping.pdf

Transferred Variables during upgrade

During the upgrade process, the following variables and configuration parameters will be transferred over to the new Dgw v2.0 firmware.

SIP v5.0 variables	Dgw v2.0 equivalents
➢ qosVlanIeee8021qTaggingEnable	➢ Bni.NetworkInterfaces.LinkName
➢ localHostSelectConfigSource	➢ Bni.NetworkInterfaces.ConnectionType
➢ localHostStaticAddress ➢ localHostStaticSubnetMask	➢ Bni.NetworkInterfaces.StaticIpAddr (Uplink - Wan)
➢ lanStaticAddress ➢ lanStaticNetworkMask	➢ Bni.NetworkInterfaces.StaticIpAddr (Lan)
➢ pppoeEnable	➢ Bni.NetworkInterfaces.ConnectionType
➢ pppoeServiceName	➢ Bni.PppServiceName
➢ pppSecuritySecretsIdentity	➢ Bni.PppIdentity (CHAP)
➢ pppSecuritySecretsSecret	➢ Bni.PppSecret (CHAP)
➢ configFileFetchingStaticHost ➢ configFileFetchingStaticPort	➢ Conf.ScriptsTransferSrvHostname
➢ configFileFetchingFileName ➢ configFileFetchingSpecificFileName	➢ Conf.ScriptGenericFileName
➢ configFiletransferProtocol	➢ Conf.ScriptsTransferProtocol
➢ configFileFetchingFileLocation	➢ Conf.ScriptsLocation
➢ configFileTransferUsername	➢ Conf.ScriptsTransferUsername
➢ configFileTransferPassword	➢ Conf.ScriptsTransferPassword
➢ configFileAutoUpdateOnRestartEnable	➢ Conf.ScriptsTransferOnRestartEnable
➢ configFileAutoUpdatePeriodicEnable	➢ Conf.ScriptsTransferPeriodicEnable
➢ configFileAutoUpdateTimeUnit	➢ Conf.ScriptsTransferPeriodicTimeUnit
➢ configFileAutoUpdatePeriod	➢ Conf.ScriptsTransferInterval
➢ configFileAutoUpdateTimeOfDay	➢ Conf.ScriptsTransferTimeOfDay
➢ configFilePrivacyEnable ➢ configFilePrivacyGenericSecret ➢ ConfigFilePrivacySpecificSecret	➢ Conf.ScriptsSecretKey See Limitation Table

SIP v5.0 variables	Dgw v2.0 equivalents
➢ sysConfigNetworkEthernetSpeed	➢ Eth.Ports.Speed
➢ sysConfigComputerEthernetSpeed	
➢ qosVlanIeee8021qVirtualLanId	➢ Eth.Vlan.VlanId
➢ qosVlanIeee8021qDefaultUserPriority	➢ Eth.Vlan.VlanDefaultUserPriority
➢ sntpTimeZoneString	➢ Hoc.StaticTimeZone
➢ sntpSelectConfigSource	➢ Hoc.SntpConfigSource
➢ sntpStaticHost	➢ Hoc.StaticSntpServerHost
➢ sntpStaticPort	
➢ sntpSynchronizationPeriod	➢ Hoc.SntpSynchronizationPeriod
➢ sntpSynchronizationPeriodOnError	➢ Hoc.SntpSynchronizationPeriodOnError
➢ localHostDnsOverrideEnable	➢ Hoc.dnsServersConfigSource
➢ localHostStaticPrimaryDns	➢ Hoc.StaticDnsServers.IpAddress
➢ localHostStaticSecondaryDns	
➢ localHostStaticDefaultRouter	➢ Hoc.StaticDefaultRouter
➢ syslogStaticHost	➢ Nlm.SyslogRemoteHost
➢ syslogStaticPort	
➢ localHostStaticSnmpPort	➢ Snmp.Port
➢ msStaticHost	➢ Snmp.TrapDest
➢ msStaticTrapPort	
➢ msEnable	➢ Snmp.EnableTrap
➢ httpServerPort	➢ Web.ServerPort

Transferred Variables using UMN

When using UMN v3.2.30.65 or higher, it is possible to convert the following variables and configuration parameters over to Dgw v2.0 configuration scripts. These can be used once the unit is in DGW 2.0 to configure the unit.

SIP v5.0 variables	Dgw v2.0 equivalents
Sip MIB	**SipEp MIB**
➢ Port	➢ Gateway[default].Port
➢ Domain	➢ Gateway[default].Domain
➢ ServerSelectConfigSource	Must be set to static otherwise a warning is sent
➢ HomeDomainProxyStaticHost ➢ HomeDomainProxyStaticPort	➢ DefaultStaticProxyHomeDomainHost
➢ OutboundProxyStaticHost ➢ OutboundProxyStaticPort	➢ DefaultStaticProxyOutboundHost
➢ TransportRegistrationEnable	➢ TransportConfig[Uplink].RegistrationEnable
➢ TransportContactEnable	➢ TransportConfig[Uplink].ContactEnable
➢ TransportEnable	➢ TransportConfig[Uplink].UdpEnable ➢ TransportConfig[Uplink].TcpEnable
➢ TransportQValue	➢ TransportConfig[Uplink].UdpQValue ➢ TransportConfig[Uplink].TcpQValue
➢ RegistrarStaticHost ➢ RegistrarStaticPort	➢ DefaultStaticRegistrarServerHost
➢ UAIfTable.sipUAMainUsername	➢ UserAgent.UserName
➢ UAIfTable.sipUADisplayName	➢ UserAgent.FriendlyName
➢ UAIfTable.sipUAOtherAcceptedUsernames	Not converted, a warning is sent
➢ UAIfTable.sipUAMaximumSessionExpirationDelay	➢ DefaultSessionTimerMaximumExpirationDelay[1]
➢ UAIfTable.sipUAMinimumSessionExpirationDelay	➢ DefaultSessionTimerMinimumExpirationDelay[1]
➢ UAIfAuthenticationTable.sipUAAuthRealm	➢ Authentication.Realm [1]
➢ UAIfAuthenticationTable. sipUAAuthUsername	➢ Authentication.Username [1]
➢ UAIfAuthenticationTable. sipUAAuthPassword	➢ Authentication.Password [1]
➢ UAIfAuthenticationTable. sipUAAuthValidateRealm	➢ Authentication.ValidationRealm[1]
➢ ReRegistrationTime	➢ DefaultRegistrationRefreshTime

[1] A warning is sent when the SIP v5.0 authentication table exceeds the size of the Dgw v2.0 authentication table.

SIP v5.0 variables	Dgw v2.0 equivalents
➢ PenaltyBoxEnable	➢ PenaltyBox Enable
➢ PenaltyBoxTime	➢ PenaltyBoxTime
➢ RegistrationProposedExpirationvalue	➢ DefaultRegistrationProposedExpirationValue
ifAdmin MIB	**epAdm MIB**
➢ InitialAdminState	➢ Endpoint.InitialAdminStateConfig
rtpConf	**mipt MIB**
➢ rtpConfigbasePort	➢ IpTransportRtpBasePort
voiceIf MIB	**mipt MIB**
➢ Table.voiceIfG711VoiceActivityDetectionEnable	➢ EpSpecificCodec.GenericVoiceActivityDetection
➢ Table.voiceIfG729VoiceActivityDetectionEnable	
➢ CodecTable.voiceIfCodecPreferred	Set priority 10 on the preferred codec
➢ CodecTable.voiceIfCodecPcmuEnable	➢ EpSpecificCodecG711Mulaw.VoiceEnable
➢ CodecTable.voiceIfCodecPcmuMinPTime	➢ EpSpecificCodecG711Mulaw.MinPTime
➢ CodecTable.voiceIfCodecPcmuMaxPTime	➢ EpSpecificCodecG711Mulaw.MaxPTime
➢ CodecTable.voiceIfCodecPcmaEnable	➢ EpSpecificCodecG711Alaw.VoiceEnable
➢ CodecTable.voiceIfCodecPcmaMinPTime	➢ EpSpecificCodecG711Alaw.MinPTime
➢ CodecTable.voiceIfCodecPcmaMaxPTime	➢ EpSpecificCodecG711Alaw.MaxPTime
➢ CodecTable.voiceIfCodecG729Enable	➢ epSpecificCodecG729.VoiceEnable
➢ CodecTable.voiceIfCodecG729MinPTime	➢ epSpecificCodecG729.MinPTime
➢ CodecTable.voiceIfCodecG729MaxPTime	➢ epSpecificCodecG729.MaxPTime
➢ CodecTable.voiceIfCodecG723Enable	➢ EpSpecificCodecG723.VoiceEnable
➢ CodecTable.voiceIfCodecG723MinPTime	➢ EpSpecificCodecG723.MinPTime
➢ CodecTable.voiceIfCodecG723MaxPTime	➢ EpSpecificCodecG723.MaxPTime
➢ CodecTable. voiceIfCodecG72616kbpsEnable	➢ EpSpecificCodecG726r16kbps.VoiceEnable
➢ CodecTable. voiceIfCodecG72616kbpsMinPTime	➢ EpSpecificCodecG726r16kbps.MinPTime
➢ CodecTable. voiceIfCodecG72616kbpsMaxPTime	➢ EpSpecificCodecG726r16kbps.MaxPTime
➢ CodecTable. voiceIfCodecG72624kbpsEnable	➢ EpSpecificCodecG726r24kbps.VoiceEnable
➢ CodecTable. voiceIfCodecG72624kbpsMinPTime	➢ EpSpecificCodecG726r24kbps.MinPTime
➢ CodecTable. voiceIfCodecG72624kbpsMaxPTime	➢ EpSpecificCodecG726r24kbps.MaxPTime
➢ CodecTable. voiceIfCodecG72632kbpsEnable	➢ EpSpecificCodecG726r32kbps.VoiceEnable
➢ CodecTable. voiceIfCodecG72632kbpsMinPTime	➢ EpSpecificCodecG726r32kbps.MinPTime
➢ CodecTable. voiceIfCodecG72632kbpsMaxPTime	➢ EpSpecificCodecG726r32kbps.MaxPTime

SIP v5.0 variables	Dgw v2.0 equivalents
➢ CodecTable. voiceIfCodecG72640kbpsEnable	➢ EpSpecificCodecG726r40kbps.VoiceEnable
➢ CodecTable. voiceIfCodecG72640kbpsMinPTime	➢ EpSpecificCodecG726r40kbps.MinPTime
➢ CodecTable. voiceIfCodecG72640kbpsMaxPTime	➢ EpSpecificCodecG726r40kbps.MaxPTime
dataIf MIB	**mipt MIB**
➢ CodecTable.dataIfClearChannelCodecPreferred	Set priority 10 on the preferred codec
➢ CodecTable.dataIfCodecT38Enable	➢ EpSpecificCodecT38.DataEnable
➢ CodecTable.dataIfCodecT38ProtectionLevel	➢ EpSpecificCodecT38.RedundancyLevel
➢ T38FinalFramesRedundancy	➢ DefaultCodecT38FinalFramesRedundancy
➢ T38NoSignalEnable	➢ DefaultCodecT38NoSignalEnable
➢ T38NoSignalTimeout	➢ DefaultCodecT38NoSignalTimeout
➢ dataIfT38basePort	➢ IpTransportT38BasePort mip
dataIf MIB	**tellIf. specificMachineDetection MIB**
➢ dataIfCngToneDetectionEnable	➢ CngToneDetection
➢ dataIfCedFaxToneEnable	➢ BehaviorOnCedToneDetection
➢ dataIfAnalogCedDetectionBehavior	
digitMap MIB	**pots MIB**
➢ ProcessDigitsWhenPressed	➢ dtmfMapDigitDetection
digitMaps MIB	**epServ MIB**
➢ AllowedTable.digitMapAllowedEnable	➢ CallDtmfMapAllowed.Enable
➢ AllowedTable.digitMapAllowedDigitMap	➢ CallDtmfMapAllowed.DtmfMap
➢ AllowedTable.digitMapPrefixedDigitRemovalCount	➢ CallDtmfMapAllowed.DtmfTransformation
➢ AllowedTable.digitMapPrependedString	
➢ AllowedTable.digitMapSuffixStringToRemove	
➢ AllowedTable.digitMapAllowedLineToApply	➢ CallDtmfMapAllowed.EpId
➢ RefusedTable.digitMapRefusedEnable	➢ CallDtmfMapRefuse.Enable
➢ RefusedTable.digitMapRefusedDigitMap	➢ CallDtmfMapRefuse.DtmfMap
➢ RefusedTable.digitMapRefusedLineToApply	➢ CallDtmfMapRefuse.EpId
➢ TimeoutCompletion	➢ DtmfMapTimeoutCompletion
➢ TimeoutFirstDigit	➢ DtmfMapTimeoutFirstDtmf
➢ TimeoutInterDigit	➢ DtmfMapTimeoutInterDtmf
subscriberServicesIfEnablingTable MIB	**epServ MIB**
➢ subscriberServicesHoldEnable	➢ EpSpecificHold.EnableConfig

SIP v5.0 variables	Dgw v2.0 equivalents
	➢ EpSpecificHold.Enable
➢ subscriberServicesCallWaitingEnable	➢ EpSpecificCallWaiting.EnableConfig ➢ EpSpecificCallWaiting.Enable
➢ subscriberServicesSecondCallEnable	➢ EpSpecificSecondCall.EnableConfig ➢ EpSpecificSecondCall.Enable
➢ subscriberServicesBlindTransferEnable	➢ EpSpecificTransfer.EnableConfig ➢ EpSpecificTransfer.BlindEnable
➢ subscriberServicesAttendedTransferEnable	➢ EpSpecificTransfer.EnableConfig ➢ EpSpecificTransfer.AttendedEnable
➢ subscriberServicesConferenceEnable	➢ EpSpecificConference.EnableConfig ➢ EpSpecificConference.Enable
➢ subscriberServicesCallForwardUnconditionnalEnable	➢ EpSpecificForwardUnconditional.EnableConfig ➢ EpSpecificForwardUnconditional.Enable
➢ subscriberServicesCallForwardOnBusyEnable	➢ EpSpecificForwardOnBusy.EnableConfig ➢ EpSpecificForwardOnBusy.Enable
➢ subscriberServicescallForwardOnNoAnswerEnable	➢ EpSpecificForwardNoAnswer.EnableConfig ➢ EpSpecificForwardNoAnswer.Enable
subscriberServicesIfCallForwardActivationTable MIB	**epServ MIB**
➢ CallForwardUnconditionalActivation	➢ ForwardUnconditionalConfig.Activation
➢ CallForwardUnconditionalForwardingAddress	➢ ForwardUnconditionalConfig.ForwardingAddress
➢ CallForwardOnBusyActivation	➢ ForwardOnBusyConfig.Activation
➢ CallForwardOnBusyForwardingAddress	➢ ForwardOnBusyConfig.ForwardingAddress
➢ CallForwardOnNoAnswerActivation	➢ ForwardNoAnswerConfig.Activation
➢ CallForwardOnNoAnswerForwardingAddress	➢ ForwardNoAnswerConfig.ForwardingAddress
➢ CallForwardOnNoAnswerTimeout	➢ ForwardNoAnswerConfig.Timeout
subscriberServices MIB	**epServ MIB**
➢ callForwardUnconditionalEnableDigitMap	➢ DefaultForwardUnconditionalDtmfMapActivation
➢ callForwardUnconditionalDisableDigitMap	➢ DefaultForwardUnconditionalDtmfMapDeactivation
➢ callForwardOnBusyEnableDigitMap	➢ DefaultForwardOnBusyDtmfMapActivation
➢ callForwardOnBusyDisableDigitMap	➢ DefaultForwardOnBusyDtmfMapDeactivation
➢ callForwardOnNoAnswerEnableDigitMap	➢ DefaultForwardNoAnswerDtmfMapActivation
➢ callForwardOnNoAnswerDisableDigitMap	➢ DefaultForwardNoAnswerDtmfMapDeactivation
➢ callWaitingCancelDigitMap	➢ DefaultcallWaitingCancelDtmfMap

SIP v5.0 variables	Dgw v2.0 equivalents
telephonyAttributes MIB	**epServ MIB**
➢ IfFeaturesTable.AutomaticCallEnable	➢ EpSpecificAutoCall.Enable
➢ IfFeaturesTable.AutomaticCallTargetAddress	➢ EpSpecificAutoCall.TargetAddress
➢ IfFeaturesTable.HookFlashProcessing	Not converted. Warning sent when Out of Band using RTP if selected in IP 5.0
telephony MIB	**tellIf MIB**
➢ CountrySelection	➢ CountrySelection Some countries are not supported
➢ countryCustomizationToneTable.Override	➢ CountryCustomizationTone.Override
➢ countryCustomizationToneTable.Pattern	➢ CountryCustomizationTone.Pattern
SipInterop MIB	**tellIf MIB**
➢ SdpDirectionAttributeEnable	➢ InteropSdpDirectionAttributeEnable
➢ OnHoldSdpStreamDirection	➢ InteropOnHoldSdpStreamDirection
➢ OnHoldAnswerSdpStreamDirection	➢ InteropOnHoldAnswerSdpStreamDirection
sipInterop MIB	**sipEp MIB**
➢ TransmissionTimeout	➢ InteropTransmissionTimeout
qos MIB	**lQos MIB**
➢ SignalingDiffServ	➢ ServiceClasses[100].DiffServ
➢ VoiceDiffServ	➢ ServiceClasses[200].DiffServ
➢ T38FaxDiffServ	➢ ServiceClasses[300].DiffServ
➢ SignalingIeee8021qEnable	➢ Ethernet8021QTagging[*].EnablePriorityTagging
➢ SignalingIeee8021qUserpriority	➢ Ethernet8021QTagging[100].UserPriority Set to 0 if qosSignalingIeee8021qEnable is disabled
➢ VoiceIeee8021qEnable	➢ Ethernet8021QTagging[*].EnablePriorityTagging
➢ VoiceIeee8021qUserPriority	➢ LQos.Ethernet8021QTagging[200].UserPriority Set to 0 if qosVoiceIeee8021qEnable is disabled
➢ T38FaxIeee8021qEnable	➢ LQos.Ethernet8021QTagging[*].EnablePriorityTagging
➢ T38FaxIeee8021qUserPriority	➢ LQos.Ethernet8021QTagging[300].UserPriority Set to 0 if qosT38FaxIeee8021qEnable is disabled

Configuration fields not listed in the above table will need to be either reconfigured manually or via the use of configuration scripts. For more information, see the **Dgw v2.0 Configuration Reference Guide**, included with the Dgw v2.0 documentation, also available from the MSP.

For more information on the variables please refer to ***Technical Bulletin 0653 - SIP v5.0 to Dgw v2.0 Variables Mapping.pdf***.

Limitations

<table>
<tr><th>Feature</th><th>Details</th></tr>
<tr><td rowspan="2">PPPoE (4102S only)</td><td>You should not use the PAP authentication protocol during the upgrade from SIP v5.0 to Dgw v2.0.
The PPPoE server should be configured to use CHAP during the upgrade procedure from SIP v5.0 to Dgw 2.0.</td></tr>
<tr><td>Both CHAP and PAP are supported in Dgw v2.0, but only one at a time. With SIP v5.0, the authentication protocol was detected automatically. When upgrading to Dgw v2.0, the CHAP username and password will be transferred and the device will be configured in CHAP mode.. The PAP protocol can be configured manually or via a script.</td></tr>
<tr><td>DHCP vendor options</td><td>The DHCP vendor options from SIP v5.0 are no longer supported. The following parameters will now need to be configured manually or via configuration scripts:
<table>
<tr><th>Option</th><th>Dgw v2.0 script equivalent</th></tr>
<tr><td>Image Primary Server</td><td>Fpu.MfpTransferSrvHostname</td></tr>
<tr><td>Image Secondary Server</td><td>Fpu.MfpTransferSrvHostname</td></tr>
<tr><td>Management Server</td><td>Snmp.TrapDest
Snmp.EnableTrap</td></tr>
<tr><td>File fetching host</td><td>Conf.ScriptsTransferSrvHostname</td></tr>
<tr><td>Sip Registrar</td><td>SipEp.DefaultStaticRegistrarServerHost</td></tr>
<tr><td>SIP Proxy</td><td>SipEp.DefaultStaticProxyHomeDomainHost</td></tr>
<tr><td>SIP Outbound Proxy</td><td>SipEp.DefaultStaticProxyOutboundHost</td></tr>
<tr><td>SIP Presence Compositor</td><td>SipEp.
DefaultStaticPresenceCompositorServerHost</td></tr>
</table></td></tr>
<tr><td>Network Mask</td><td>SIP v5.0 supported a netmask of 255.255.255.254 (/31) and a default router 0.0.0.0.
In Dgw v2.0, the limitation is a netmask of 255.255.255.252 (/30).
A network configuration with /31 will not be transferred, and the rest of the configuration will also not be transferred.</td></tr>
<tr><td>Special characters</td><td>Please note that the following MIB variables may not contain the “:” character, or any other special characters (é à è : > < | ^ * ? etc). If one of these characters is present, parts of the configuration will not be transferred during the upgrade process. configFileFetchingStaticHost sntpStaticHost syslogStaticHost msStaticHost</td></tr>
<tr><td>PPPoE link</td><td>The SIP Gateway State is “Network down” even if “Uplink” interface is “Active” in PPPoE. This means you will obtain an IP address via PPPoE, the SIP registration will</td></tr>
</table>

Feature	Details
	be successful, but the SIP Gateway will show “Network Down”. You will still however be able to operate your Mediatrix gateway.
Public and private keys	Dgw 2.0 contains a single key parameter for the configuration file encryption (Conf.ScriptsSecretKey). Therefore only one of the public and private keys will be transferred, according to the following algorithm: • If configFilePrivacyGenericSecret and configFilePrivacySpecificSecret are both present, configFilePrivacyGenericSecret will be transferred to Conf.ScriptsSecretKey. • If configFilePrivacyGenericSecret is set and configFilePrivacySpecificSecret is empty, configFilePrivacyGenericSecret will be transferred to Conf.ScriptsSecretKey. • If configFilePrivacySpecificSecret is set and configFilePrivacyGenericSecret is empty, configFilePrivacySpecificSecret will be transferred to Conf.ScriptsSecretKey.
DHCP WAN Address	On units with two network interfaces, DGW v2.0 assigns the address ‘192.168.0.10’ to the LAN interface. If the DHCP server provides an address to the WAN interface in the 192.168.0.0/24 subnet, the unit disables the WAN interface. In this condition, the unit Power LED will blink and no configuration script will be fetched.
Static DNS configuration	On SIP v5.0 units configured with static DNS server addresses, the MIB variable *localHostDnsOverideEnable* needs to be set to Enable to keep the static DNS configuration in DGW 2.0. For more information on changing the value of this variable, please refer to *Chapter 8 0 - IP address and Network Configuration* of the **MTX 41xx SIP Reference v5-0** guide available from the MSP.
Config file fetching server	When using the File Fetching feature in SIP v5.0 or the Configuration Script feature in Dgw 2.0, a valid server IP/FQDN address and protocol must be configured. To avoid upgrade problem, the server must be reachable by the Mediatrix unit during the upgrade or downgrade procedure.

Removed Previous Limitations

Obsolete Technical Bulletin 0649

- VLAN settings will not be transferred during the upgrade -> VLAN setting is now transfered

Obsolete Technical Bulletin 0626

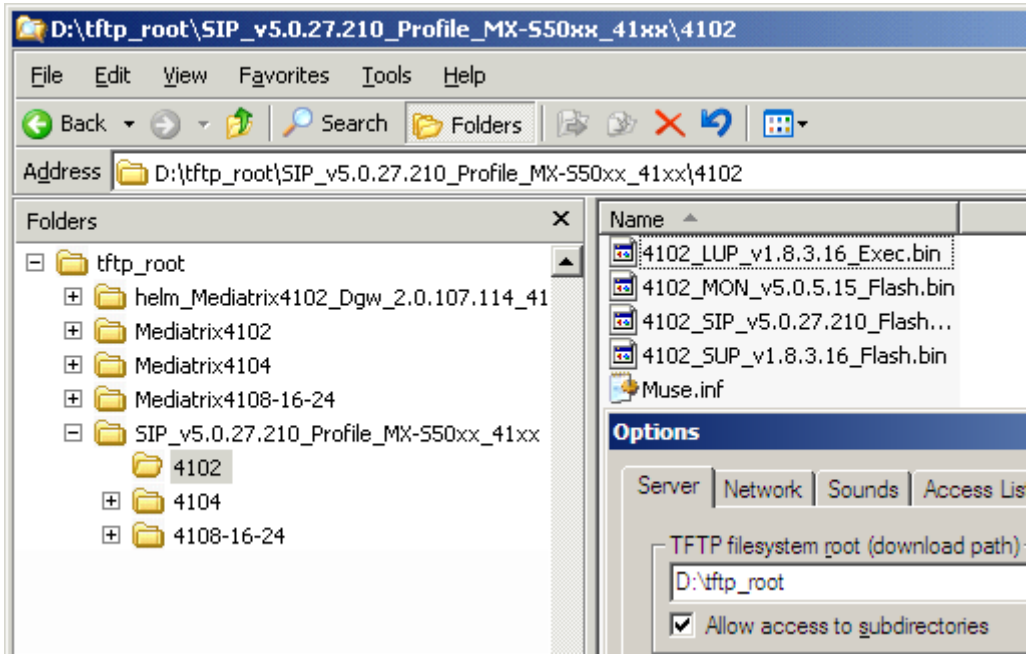
- %mac%.cfg inserted automatically in the specific script field -> this has been fixed.

Upgrade Procedure

1. **Upgrading Mediatrix unit to SIP v5.0r28.229:**

   a. Start your TFTP server. Make sure your TFTP root directory is set properly, and that the firmware load is extracted in the TFTP root directory.

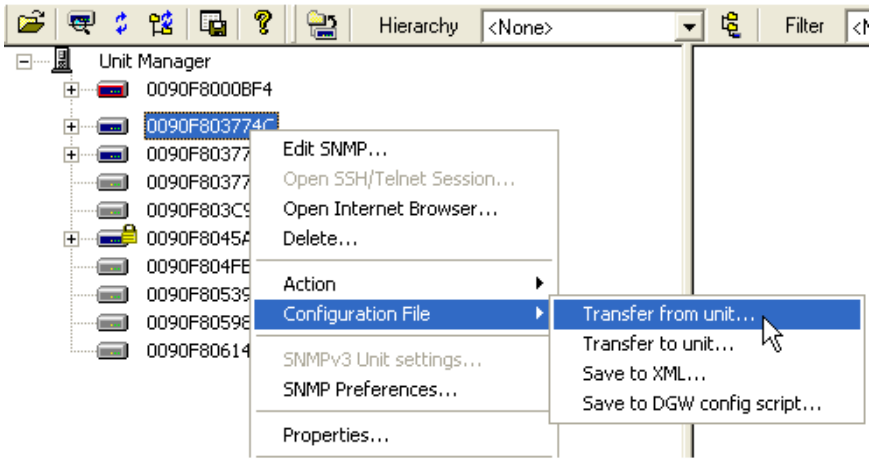
   b. If you need additional information to the upgrade procedure, please refer to the SIP Reference User Manual, ***Chapter 3 Web Interface Management – Firmware Download Section*** or ***Chapter 13 SNMP Configuration – Software Download Section***.



Note: The firmware versions may vary.

2. **Taking a backup of SIP v5.0 configuration file.**

   a. Before installing the Transition load, a backup of the configuration file should be saved. This backup can be done using UMN. Right click on the MAC address of the unit and select *Configuration File > Transfer from unit*....



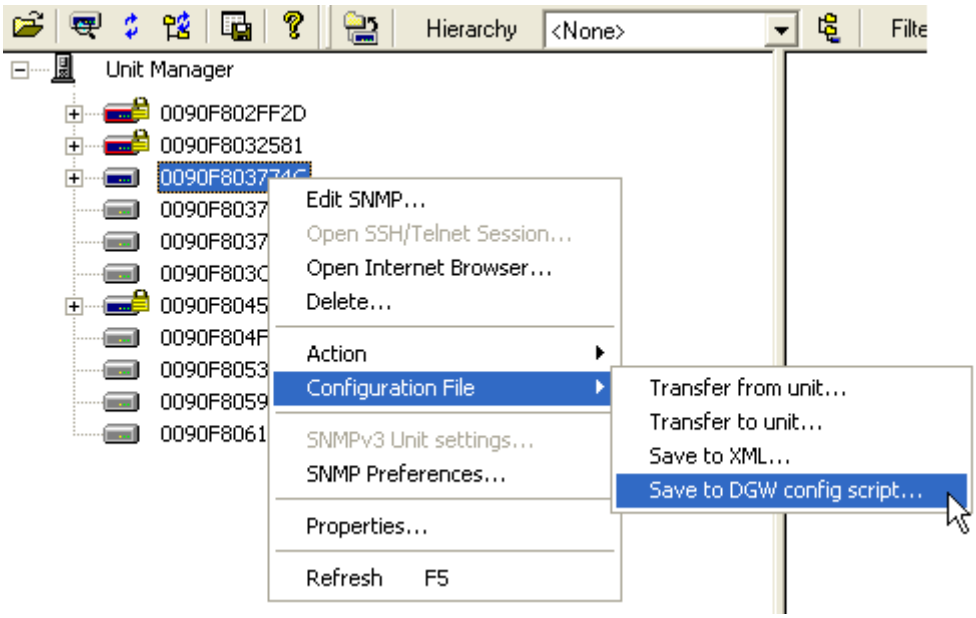
b. The UMN will creates a configuration file for the Mediatrix unit. This file, saved in the *\CfgFile* sub-directory of the UMN installation folder, and will be named *XXX.cfg*, where *XXX* represents the MAC address of the unit. This file can be updated at any time with the configuration parameters of the selected unit. If the configuration file already exists, the UMN overwrites it.

3. Preparing Configuration Script:

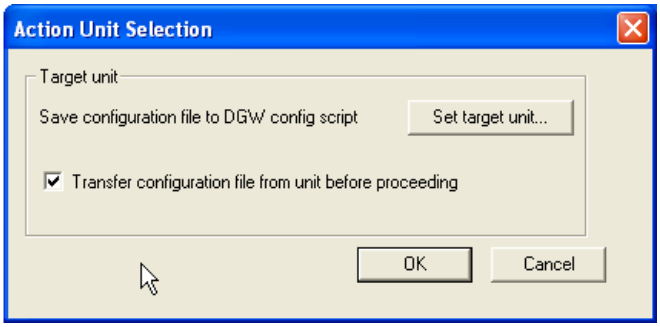
a. As stated in the Transferred Variables section, only a limited number of configuration parameters will be transferred when upgrading to Dgw v2.0. This means that for a more seamless or automated upgrade process, configuration scripts with the required parameters will be needed.

b. The configuration file fetching in Dgw v2.0 works with configuration scripts while SIP v5.0 needs configuration files. If the configuration file fetching feature is configured in SIP v5.0, to keep this feature in Dgw v2.0, a equivalent configuration script comptatible with Dgw 2.0 will need to be created.

c. As stated in the Transferred Variables using UMN section, when using UMN v3.2.30.65 or higher, it is possible to convert some SIP v5.0 variables and configuration parameters over to Dgw v2.0 configuration scripts. This configuration script can be used once the unit is in DGW 2.0 to automatically configure the unit. To create the configuration script using UMN, right-click on the MAC address of the unit and select *Configuration File > Save to Dgw Config script*....



d. If you want to you want to update the configuration file with the current unit's configuration before converting the file to Dgw config script, select the *Transfer configuration file from unit before proceeding* option.

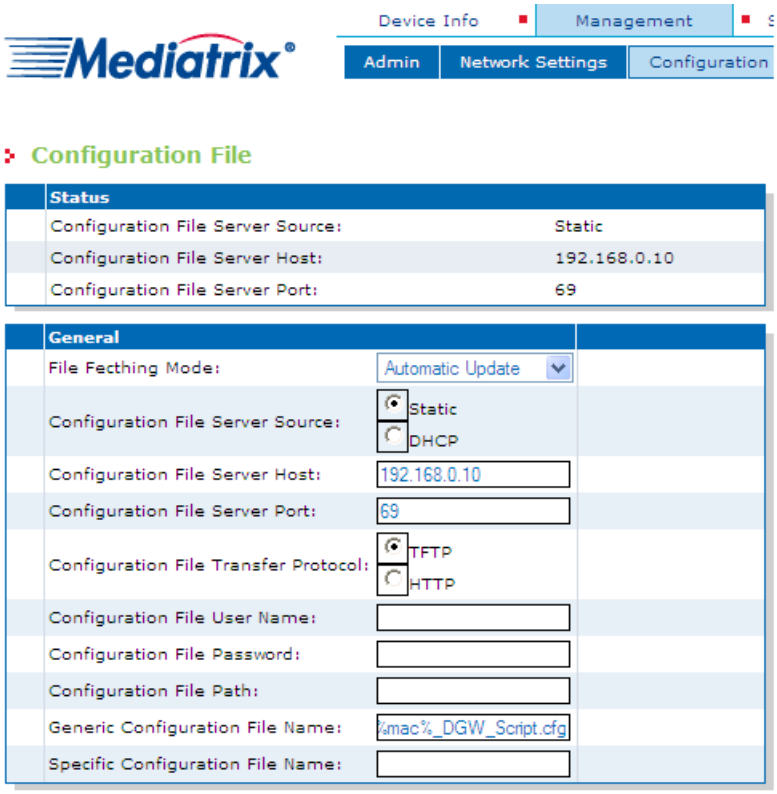


Note: Warning messages received during this procedure will also be available as comments in the Dgw2.0 script files. If an error message is received, the procedure must be restarted once the error is corrected.

e. UMN will create a configuration script for the Mediatrix unit. When saving the configuration file to Dgw config script, UMN takes the unit's configuration file (from the server folder UnitManager\CfgFile) and converts it to the Dgw format. The new file is saved as "XXXXXXXXXXXX_DGW_Script.cfg" in the server folder "UnitManager\CfgFile", where the Xs correspond to the unit's MAC address.

f. For more detailed information, please refer to the ***Unit Manager Network Help, section Peforming Actions on Mediatrix Units Uploading Configuration File*** available in UMN or ***Dgw v2.0 Application Software Configuration Guide, Chapter 37 Management Parameters – Configuration Script*** and the **Technical Bulletin 0614 - Configuration_Scripts_3000-4000-Series.pdf** available from the MSP.

The following screenshot shows a SIP v5.0 device configured to fetch the configuration file **%mac%_DGW_Script.cfg**. Once the unit has been upgraded to the transition load, procedure described in the next step, the unit will automatically send a request for a configuration script with the same filename.



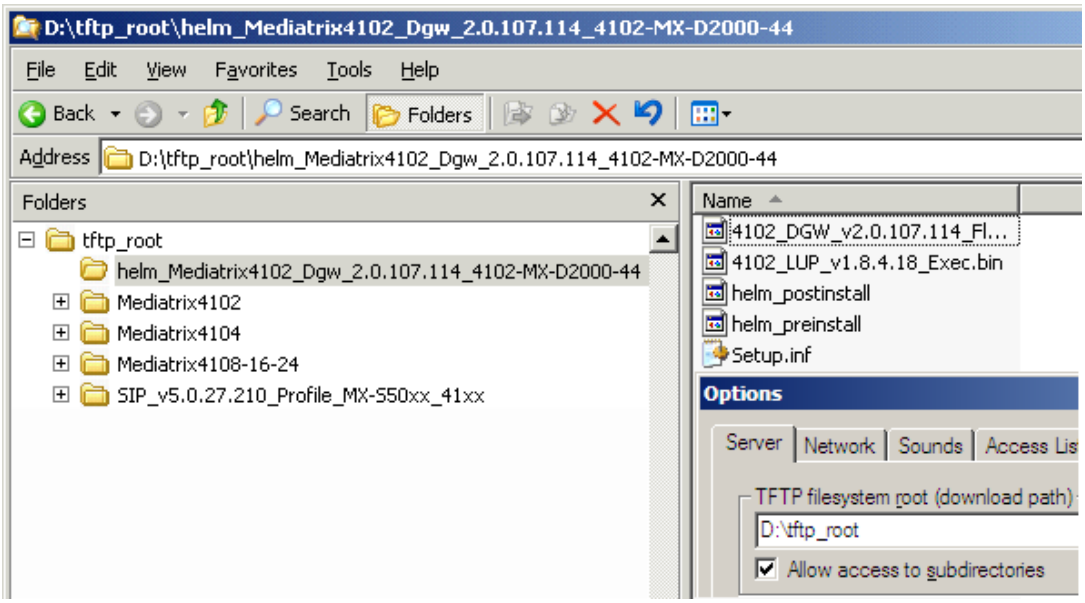
4. **Upgrading Mediatrix unit from SIP v5.0 to Dgw v2.0 transition firmware**

During the upgrade of the Dgw v2.0 transition firmware, a backup configuration file will automatically be done and saved as an Internal file. This file used if a Downgrade back to SIP v5.0 is necessary. See Downgrade Procedure below.

Important : If a reset to default settings (factory reset) is done at any time after the upgrade procedure, the configuration file for SIP v5.0 will be lost and the Mediatrix unit will not be configured once Downgrade Procedure to SIP v5.0 is completed.

If for some reason the Dgw v2.0 units becomes unreachable, the partial reset feature will allow the unit to obtain or use a known IP address.

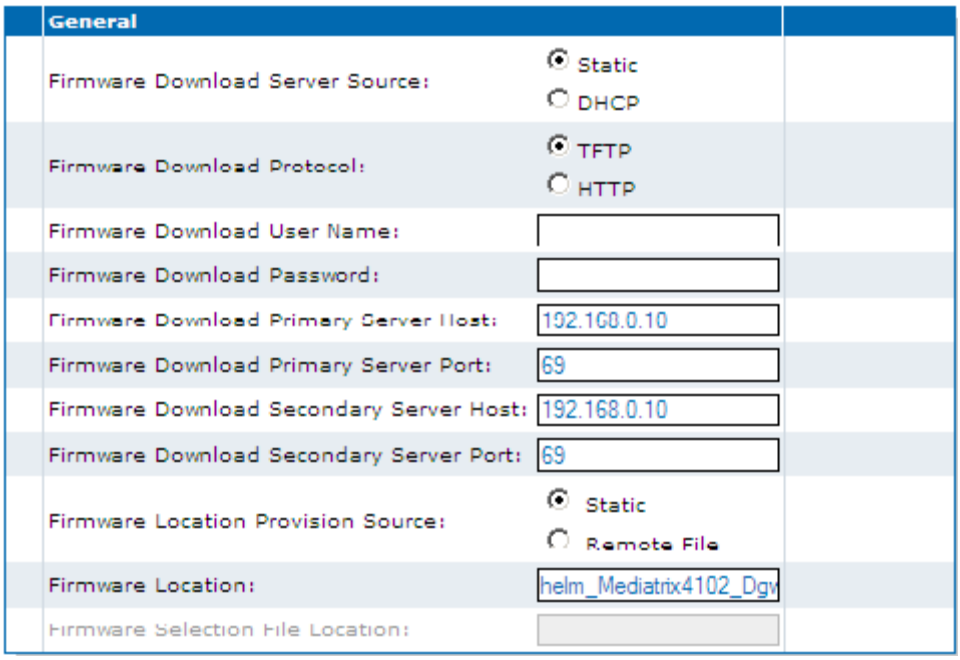
a. Start your TFTP server. Make sure your TFTP root directory is set properly, and that firmware is extracted in the TFTP root directory. See the screenshot below.



The extracted firmwares should have these names:

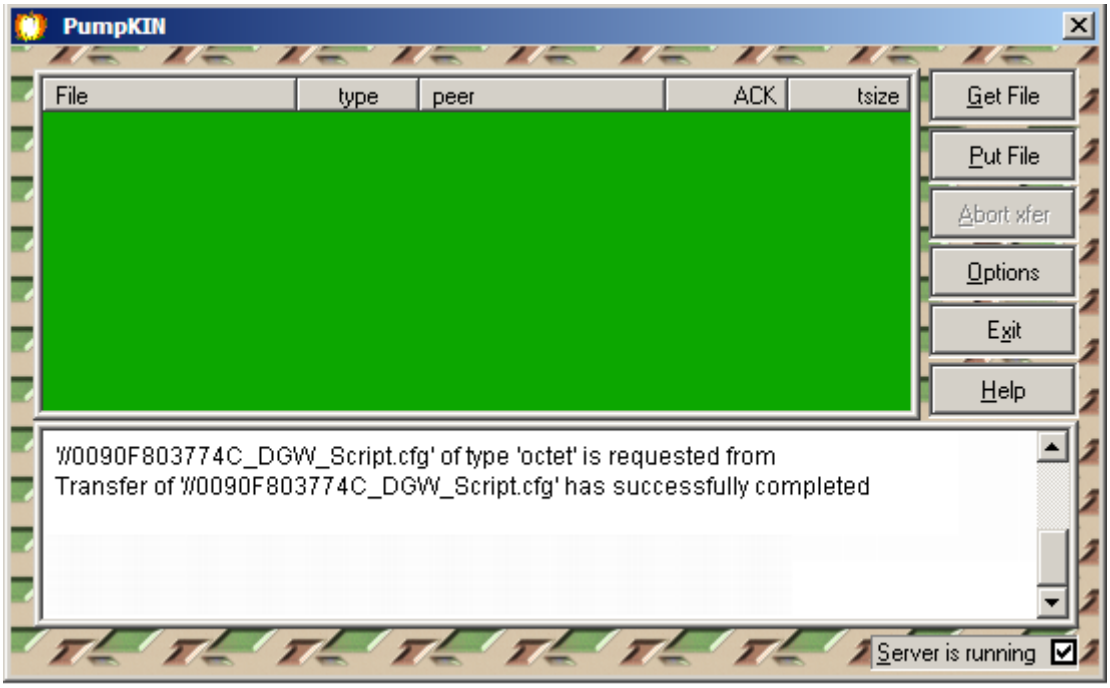
- **helm_Mediatrix4102_Dgw_2.0.109.179_4102-MX-D2000-XX**
- **helm_Mediatrix4104_Dgw_2.0.109.179_4104-MX-D2000-XX**
- **helm_Mediatrix4108-16-24_Dgw_2.0.109.179_4108-16-24-MX-D2000-XX**

b. The following screenshot uses the “Firmware location” method, but “Remote file” can also be used.



c. When the upgrade to **helm_Mediatrix41XX_Dgw_2.0.109.179_41XX-MX-D2000-XX** is done, the unit will restart and apply basic configuration settings and networking parameters as described in section 1. See the Transferred Variables section for additional details.

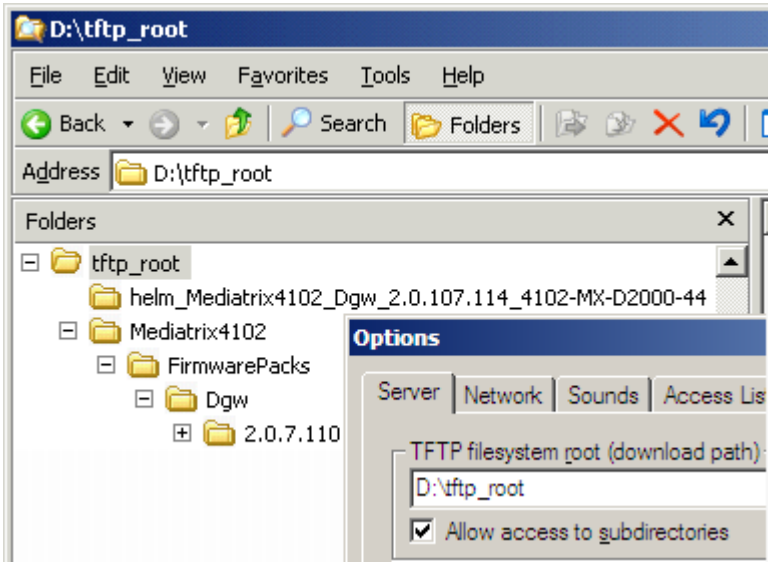
d. The unit will restart again and be ready for configuration. If configuration file fetching was configured in step 2, the unit will download the configuration **scripts** and complete the migration to Dgw 2.0. Once the configuration scripts is downloaded, the Mediatrix unit will restart again.



Note: Once the unit is using Dgw 2.0, it must be redetected in UMN to continue using UMN to manage the unit.

5. Upgrade the Mediatrix unit to Dgw v2.0r9.150

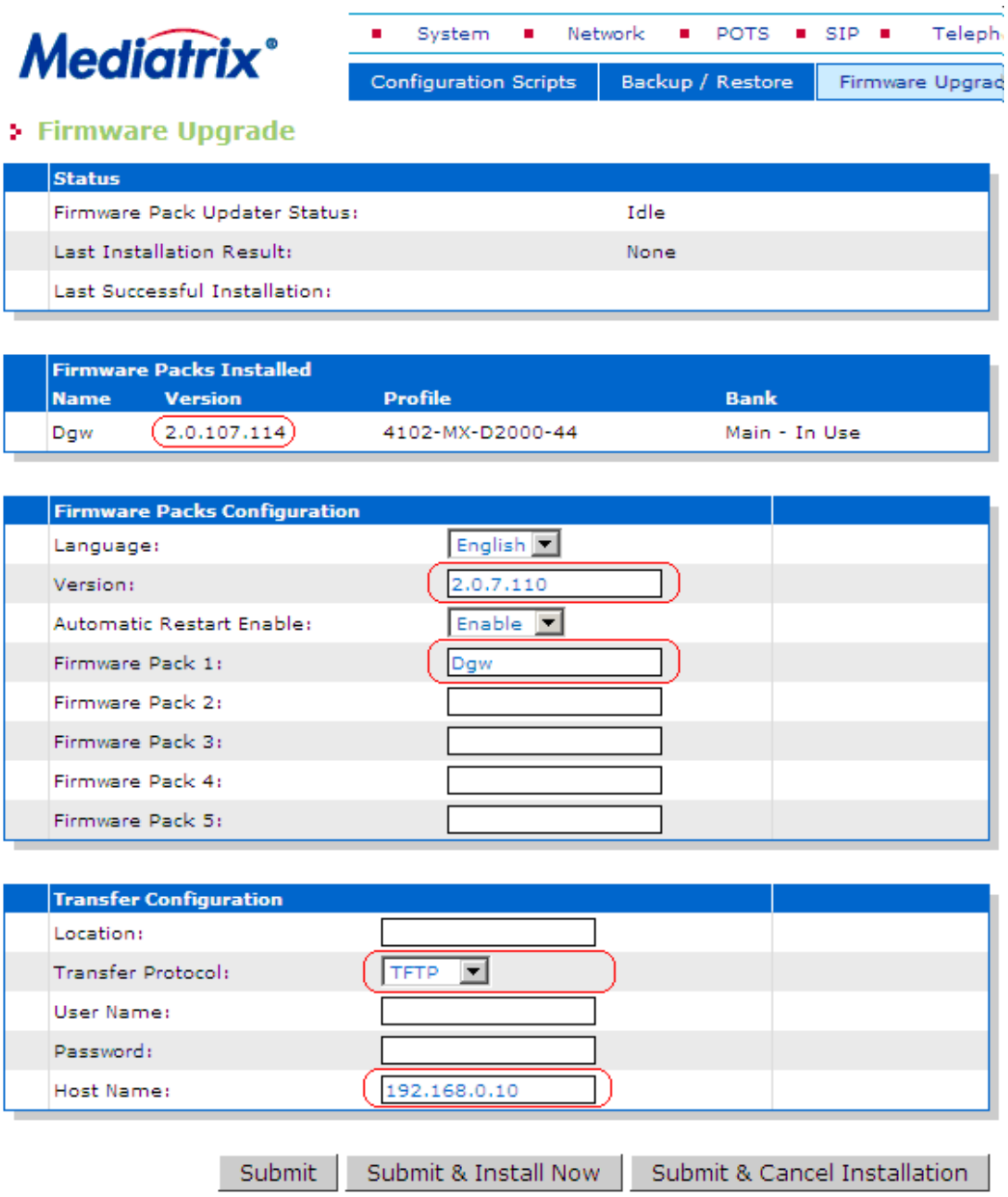
a. Start your TFTP server. Make sure your TFTP root directory is set properly, and that firmware is extracted in the TFTP root directory. See the screenshot below.



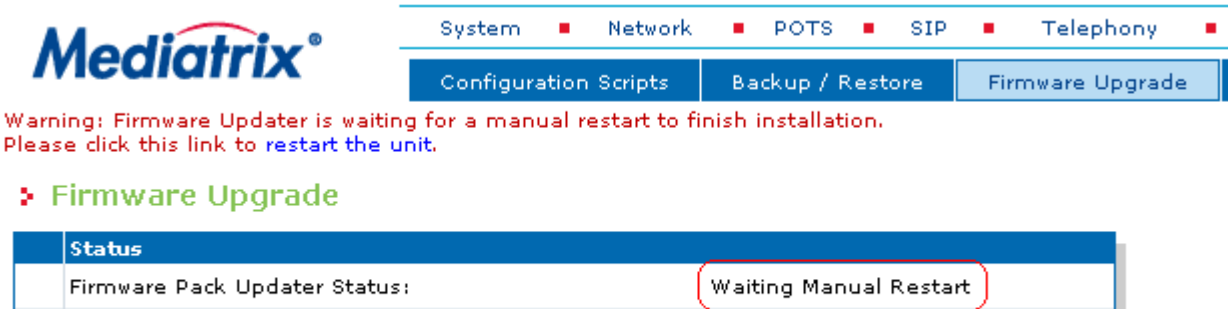
b. Log in the web page using the credentials configured with the configuration scripts or the default username ‘public” and an empty password.

c. Under the Manager Firmware Upgrade, configure the following:

- Version number: **2.0.9.150**
- *Automatic Restart Enable*: **Enable**
- Firmware Pack: **Dgw**
- Enter the Location (from the TFTP root). In this example the field should be empty
- Transfer protocol: **TFTP**
- TFTP server address: *IP address of the TFTP server*



d. If the Automatic Restart Enable is enabled, once the upgrade is done the unit will restart automatically. Otherwise, restart the unit by following the link at the top of the page. Refresh the page every few minutes to see the progress.



e. If the configuration script was configured, the same configuration scripts will be downloaded and executed after the Mediatrix unit reboots.

If you need help or additional information to upgrade the firmware on a Mediatrix unit, please refer to the :

Technical Bulletin 0604 - Software Download Mediatrix 3000-4000 series.pdf

Software Configuration Guide Chapter 39 – Management Parameter – Firmware Download.

During step 2 of the Upgrade Procedure - *Upgrading Mediatrix unit from SIP v5.0 to Dgw v2.0 transition firmware,* a backup configuration file was automatically done and saved as an internal file. This file will be needed if a downgrade back to SIP v5.0 is necessary, see Downgrade Procedure below.

The file can be deleted, once the Mediatrix unit is installed and it is concluded that a downgrade to SIP v5.0 will not be necessary.

Downgrade Procedure

This procedure explains the steps needed to downgrade from Dgw v2.0r9.150 back to SIP v5.0r28.229.

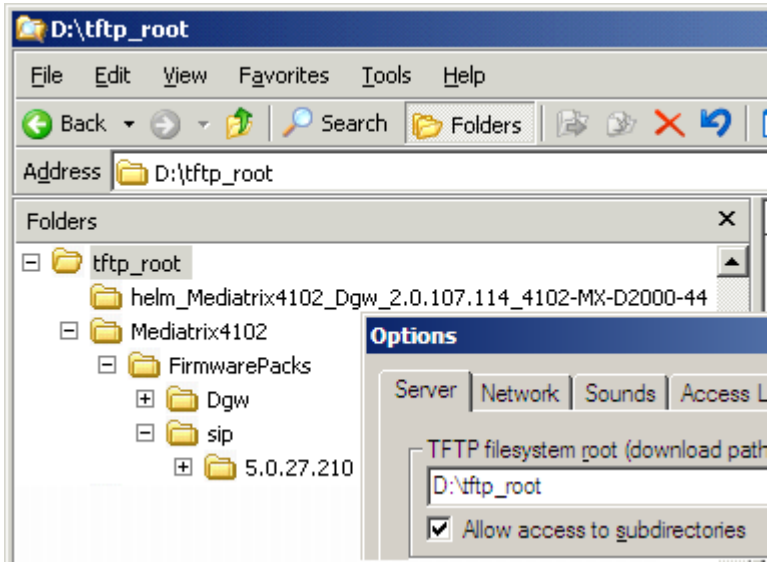
Important : If the SIP v5.0 Mediatrix unit was provisionned for an automatic upgrade to Dgw v2.0 transition load, a downgrade from Dgw v2.0 to SIP v5.0 may automatically re-initiate and upgrade to Dgw 2.0. Removing the Dgw v2.0.109.179 transition load from the file server will prevent this loop.

If reset to default setting, factory reset, was done at any time before this procedure, the configuration file for SIP v5.0 will be lost and once the downgrade procedure finished, the unit will need to be reconfigured using the SIP v5.0 backup taken in step 2 of the Upgrade Procedure or the Mediatrix unit will need to be reconfigured manually.

If for some reason the SIP v5.0 unit becomes unreachable, the partial reset feature will allow the unit to obtain a known IP address.

1. **Downgrading the Mediatrix unit to SIP v5.0r28.229:**

   a. Start your TFTP server. Make sure your TFTP root directory is set properly, and that firmware is extracted in the TFTP root directory. See the screenshot below.



The zipped firmwares should have these names:

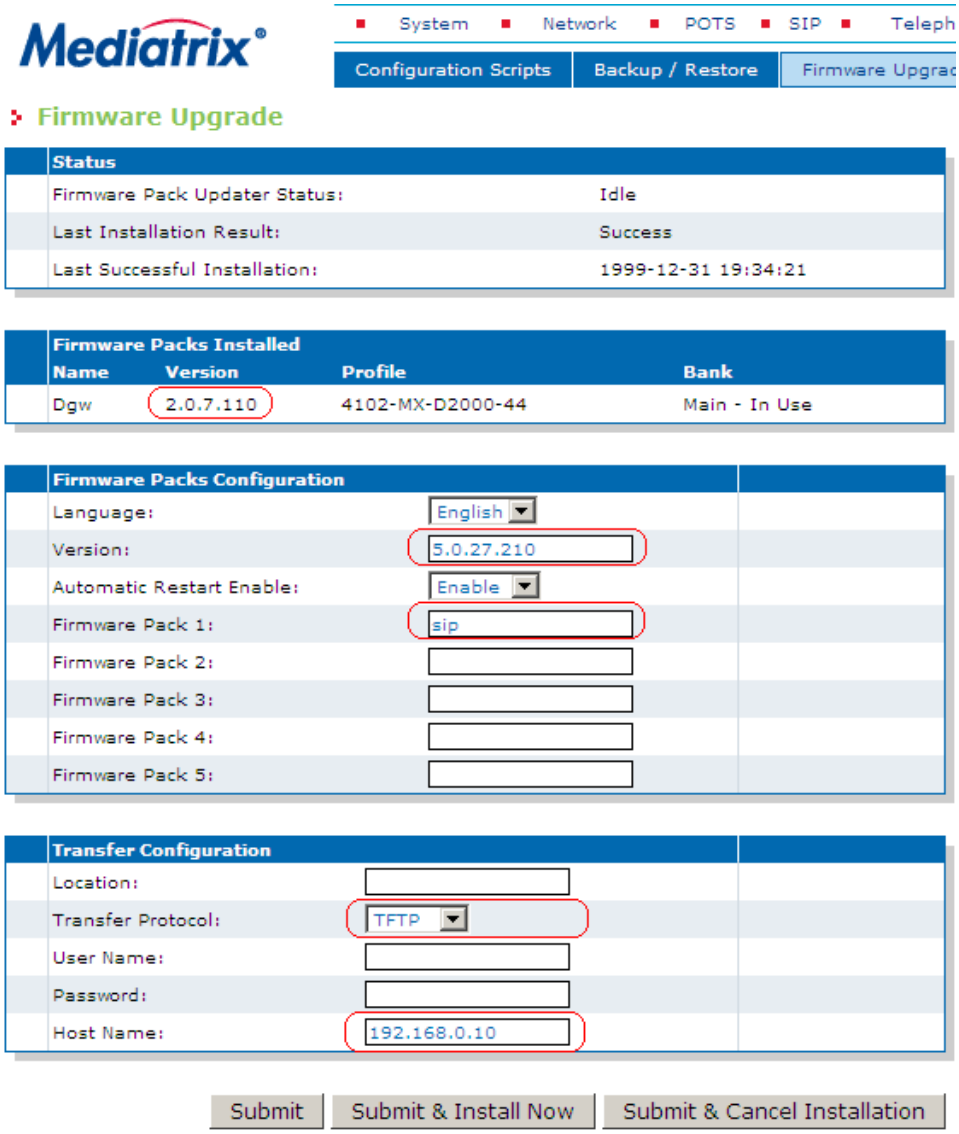
- **Dgw_Mediatrix4102_SIP_5.0.28.229_MX-S5003-01-R.zip**
- **Dgw_Mediatrix4104_SIP_5.0.28.229_MX-S5001-02-E.zip**
- **Dgw_Mediatrix4108-16-24_SIP_5.0.28.229_MX-S5001-02-E.zip**

Once the zipped files is extracted , a folder *SIP – 5.0.28.229* will be created under the *Mediatrix41xx – FirmewarePacks*.

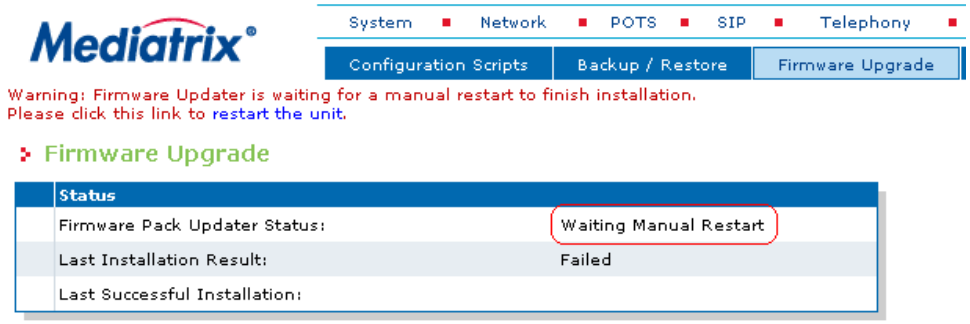
b. Under the Manager Firmware Upgrade, configure the following:

   - Version number: **5.0.28.229**
   - *Automatic Restart Enable*: **Enable**
   - Firmware Pack: **sip**
   - Enter the Location (from the TFTP root). In this example the field should be empty

- Transfer protocol: **TFTP**
- TFTP server address: *IP address of the TFTP server*



c. If the *Automatic Restart Enable* is enabled, once the upgrade is done the unit will restart automatically. Otherwise, restart the unit by following the link at the top of the page. Refresh the page every few minutes to see the progress.


Mediatrix
System ■ Network ■ POTS ■ SIP ■ Telephony ■
Configuration Scripts
Backup / Restore
Firmware Upgrade
Warning: Firmware Updater is waiting for a manual restart to finish installation.
Please click this link to restart the unit.
Firmware Upgrade
Status
Firmware Pack Updater Status: Waiting Manual Restart
Last Installation Result: Failed
Last Successful Installation:

d. Once restarted, the Mediatrix unit will have the same configuration as it did before executing **Step 4 – Upgrading Mediatrix unit from SIP v5.0 to Dgw v2.0 transition firmware** of the Upgrade Procedure.